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1. The first part of the document is a list of names and addresses of the members of the committee.





BIRD-PRESERVING BIRD-MOUNTING

AND THE

PRESERVATION OF BIRDS' EGGS.

WITH A CHAPTER ON BIRD-CATCHING.

By RICHARD AVIS.



WITH ILLUSTRATIONS.

LONDON:
GROOMBRIDGE AND SONS,
5, PATERNOSTER ROW.
1870.

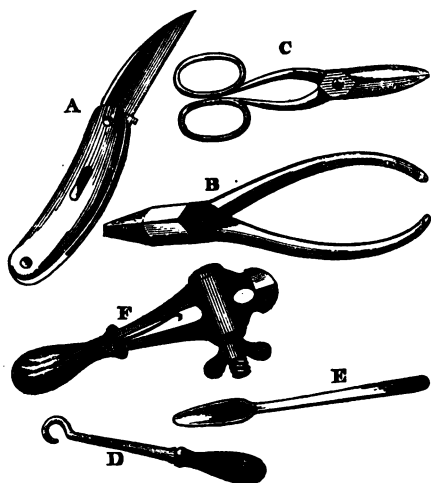
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BIRD-PRESERVING.

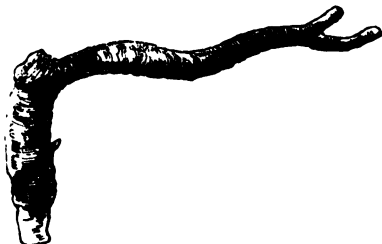
ALMOST the first thing a young naturalist takes interest in is what is commonly called "bird-stuffing," and with him, when he attempts it, the term is very applicable. Oh! the wretched, distorted things which rise from their collapsed state, where it had been better had they remained, "they mimicked Nature so abominably." But we must not suppress and dull the aspirations of genius, remembering that the most accomplished in any art had their beginning too. Many things are required to make anything of this art—such as delicacy of hand, great practice, but, above all, patience, the most inestimable of all common virtues. But I shall proceed to give a few plain directions, that the aspirant after taxidermal excellency may judge and try for himself, and not be disheartened. A fair specimen being obtained, take common cotton wadding, and with an ordinary paint-brush stick plug the throat, nostrils, and, in large birds, the ears, with it, so that when the skin is turned no juices may flow and spoil the feathers; you must then provide yourself with the following articles:—A knife of this kind, A, which is very common; a pair of cutting plyers, B; a pair of strong scissors, C, of a moderate size; a button-hook, D; a marrow-spoon, E; and a hand-vice, F. With these, a needle and thread, and a sharpener of some kind, to give your

knife an occasional touch, you are prepared, so far as implements go. Then provide yourself with annealed iron wire of various sizes ; some you may buy ready for use, some not ; but you can anneal it yourself by making it red-hot in the fire, and letting it cool in the air. Common hemp is the next article, cotton wadding, pounded whitening, and pounded alum, or



chloride of lime ; as to the poisons which are used, they will be spoken of by and by. You should also have a common bradawl or two, and some pieces of quarter-inch deal, whereon to stand the specimens when preserved, if to be placed as walking on a plane ; if not, some small pieces of twigs or small branches of trees should be kept ready for use, of various sizes according to the size of the bird ; something of this

form. Spanish chestnut, or common laurel cut in December, will be found to answer best, but this must



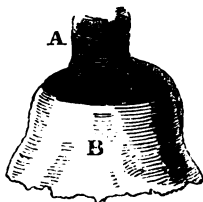
be regulated by fancy and the requirements of the case ; oak boughs are sometimes of a good shape.

The best time for preserving specimens is in spring, because then the cock birds are in the best feather, and the weather is not too warm. In mild weather three days is a good time to keep a bird, as then the skin will part from the flesh easily. If a specimen has bled much over the feathers, so as to damage them, wash them carefully but thoroughly with warm water and a sponge, and immediately cover them with pounded whitening, which will adhere to them. Dry it as it hangs upon them slowly before the fire, and then tritulating the hardened lumps gently between the fingers, the feathers will come out almost as clean as ever. To test whether the specimen is too decomposed to skin, try the feathers about the auriculars, and just above the tail, and if they do not move you may safely proceed.

Lay the bird on his back, and, parting the feathers from the insertion of the neck to the tail, you will find in most birds a bare space. Cut the skin the whole length of this, and passing the finger under it on either

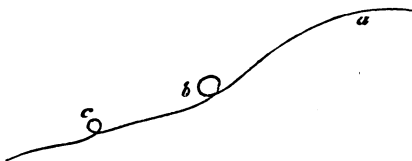
side, by laying hold of one leg and bending it forward, you will be able to bring the bare knee through the opening you have made; with your scissors cut it through at the joint; pull the shank still adhering to the leg till the skin is turned back as far as it will go; denude the bone of flesh and sinew, wrap a piece of hemp round it, steeped in a strong solution of the pounded alum, and then pull the leg by the claw, by which means the skin will be brought again to its place.

After having served both legs alike, skin carefully round the back, cutting off and leaving in the tail with that into which the feathers grow, that is, the "Pope's nose." Serve the wing bones the same as the leg, cutting them off close to the body, and turn the skin inside out down to the head. The back of the skull will then appear, and you will now find it of advantage, as soon as you have got the legs and tail free, to tie a piece of string round the body, and hang it up as a butcher skins a sheep. Make in the back of the skull



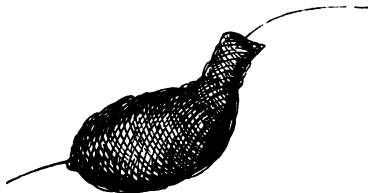
a cut of the annexed form, with your knife, which you can turn back like a trap-door, and with the marrow-spoon entirely clear out the brains; A representing the neck, and B the skin turned back. Having done this, wash the interior of the skull thoroughly with the alum, and fill it with cotton wadding. The next ope-

ration requires care and practice—namely, to get out the eyes. This is done by cutting cautiously until the lids appear, being careful not to cut the eye itself, and you can then with a forceps, which you will likewise find useful, pull each from its socket; wipe the orifice carefully, wash it with the alum solution, and fill it with cotton wadding. Cut off the neck close to the skull, wash the stump, and the whole of the interior of the skin with the alum, and the *skinning* is done. Now comes the stuffing. The ordinary mode used by bird-preservers is a simple one, and answers very well; there is a French method, however, which has its advantages, and will be adverted to hereafter. Take a piece of the wire suitable to the size of the bird—that is, as large as the legs will carry—and bend it into the following form, *a* representing the neck, *b*, the body, and *c*, the junction of the tail, allowing sufficient length of neck for the wire to pass some distance



beyond the head, and being sharpened at each end, which may be done by obliquely cutting it with the pliers. Wind upon this wire hemp to the size of the bird's body, which you should have lying by you to judge from, and it will present something of this appearance. You can shape it with the hand, but be careful not to make it the least *too large*; and, after you have finished it to your satisfaction, you may singe it as the poulterer would singe a fowl, which will make all neat; but be particular to wind the hemp very

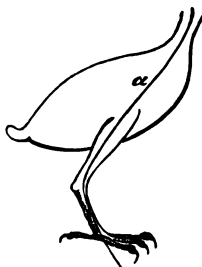
tight. Then take the skin, lay it on the table on its back, and pass the wire at the head into the marrow



where the neck is cut off, through above the roof of the mouth, and out at one nostril, and draw it up close to the skull; turn the skin back, and draw it down over the hemp body, and pass the wire spike protruding at the lower end through the flesh upon which the tail grows, about the centre, and rather below than above. The skin may now be adjusted to the hemp body, and sewn up, beginning from the top of the breast, and being particularly careful always to take the stitch from *inside*, otherwise you will draw in the feathers at every pull. At first sew it very loose, and then, with the button-hook, draw it together by degrees.

With the plyers cut two lengths of wire long enough to pass up the legs and into the neck, and leave something over to fasten the bird by to the board or spray upon which it is to be placed. The next operation requires some address and great practice, namely, the passing the wire up the legs. This is done by forcing it into the centre of the foot, and up the back of the legs into the hemp body, through it obliquely, and into the neck until it is pretty firm. In doing this, you must remember the ordinary position of a bird *when alive*, and, therefore, instead of passing the wire

the whole way *within* the skin of the leg, when you get to the part where you have cut off the bone, that is, the knee-joint, pass it through the skin to the outside, and in again through the skin from the outside where the knee would come naturally in the attitude of standing or perching—it makes little difference which. This is essential, because if the wire be passed the whole way *inside* the skin, it produces a wrong placing of the legs. The accompanying cut will illus-



trate this, *a* representing the line in which the wire should run. The bird is now stuffed, and you may at once place it upon a spray, or board, as the case may be. In placing a bird upon a spray, the first joint should be bent almost on a level with the foot; and, in placing a bird on a board, one leg should be placed somewhat behind the other. If the wings are intended to be closed, as is usually the case, bring them into their place, which may be done by putting the fingers under them, and pressing them together over the back; you may then pass a needle, or large pin, of which you should have a good supply by you, through the thick part of the upper wing into the body, and so by the lower wing, and if you allow these to protrude, you may fasten to one of them a piece of thread, and wind

it carefully and lightly round the body, which will keep the feathers in their places, and this thread should be kept on for a fortnight or three weeks, until the bird is dry. The tail should be kept in its place also for the same time, by a piece of thin wire bent over it thus :

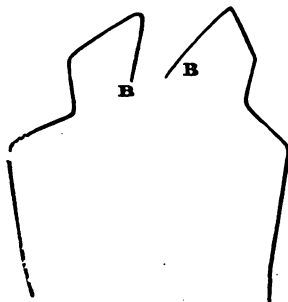


The only thing now to do is to put in the eyes. The colour of course depends on the bird, and these you may buy at any fishing-tackle shop. If you do not use eyes too large, you will find little difficulty ; the juice of the lids will act as a sufficient cement. As to the mounting, I shall say nothing about that now, but shall only advert shortly to a French method of preserving, which is more difficult, but has the advantage of superior firmness. It is this : Measuring from the insertion of the neck to the tail, make a wire frame of this form, the measure taken being from A to B.



Upon this wire hemp for the neck only, and place in the skin in the same way as before directed, only that instead of one wire being passed through that in which the tail grows, it is a fork that is passed through it. Having formed this frame, fit on to it two legs thus : and after the frame itself is in the skin, pass these from the *inside* down each leg, instead of from the outside, and fasten them on to the frame with the plyers by twisting the ends, B B, round the frame, c, in the first figure. This will make all firm, and you

can then fill the body with cut hemp, and sew up. One word as to the other preparations used by bird-



preservers. These are either corrosive sublimate or regulus of arsenic, which is yellow and of a consistence like butter. As I have said before, in cold weather, when there are no flies about, alum will do perfectly well; in warm weather either of the two others may be used. I should prefer the former—corrosive sublimate—as the other is “messy,” and the chief object is to dry up anything which can be attacked by flesh-seeking insects. When you have finished your bird, you can lay the feathers with a large needle—it is as well to have one fixed in a handle and kept for this purpose—and, tying the two mandibles of the bill together with a piece of thread until the whole specimen has hardened and dried, the work is done.

BIRD-MOUNTING.

WE will suppose that a proficiency, from practice, has been attained in the art of bird-preserving, according to the instructions given. The proficiency in preserving may apply only to the preservation and the form, great and necessary things, no doubt, as preliminaries; but, like matter without manner, of little avail alone. For attitude, I would say, as has been said to many a young artist, Go to Nature, and there you will find an original in perfection. Would you make a willow-wren look like a willow-wren, watch him as he there hangs upon the weeping birch, or stands on a bough peering in quest of food. Each bird has its own manner, and if you cannot hit the manner, or make your stuffed skin so far amenable as to assume the attitude, it is either ill-stuffed, or you want the requisite knowledge of that which you should copy. Young hands commonly suppose that a bird should stand bolt upright, with the legs almost perpendicular, or at right angles to the perch. This is a great mistake, and never to be found in Nature. Do *we* stand rigid, like a foot-soldier on drill? Does not a bird, as well as ourselves, accommodate itself to the thing upon which it rests? Assuredly it does; for birds do not, as a young bird-stuffer endeavours to do, find always a perch to rest upon in the plane of the horizon. It therefore follows that, as he keeps himself upright, his legs must accommodate themselves to

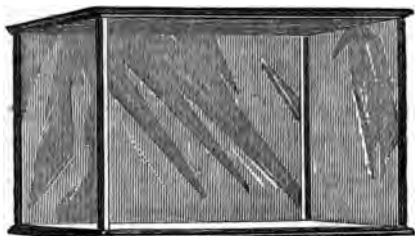
his perch. So in the ground-birds there is a gentle slope backwards from the hind toe, the balance



being preserved in both cases by throwing the body forward in proportion. It is not uncommon to see birds preserved with wings and tail spread. Now, ordinarily speaking, this is very objectionable, because very unnatural. A bird preserved is supposed to represent a bird in a state of repose, that is, not in flight; the only modification allowable being with regard to those birds whose manner it may be to have the wings more or less open on occasions: thus the falcon tribe, supposing they are represented as devouring a quarry, or two birds toying with each other. It may be that a bird essentially *aëreal*, like the wift, or perhaps some of the terns or the frigate-bird, may be represented as actually on the wing. In this case, of course, the wings must be spread; and this is best done by passing a wire, not too thick, from the base of the quill-feathers on the under side, alongside the bone into the body, where it should be carefully and coaxingly inserted towards the tail until you feel that you have a pretty good hold. You may then pass it carefully under the longest quill-feather, and through the back of the case, and fasten it by bringing it back again through and clinching it, concealing it so by the oblique position of the bird that it is not detectable. It is obvious that by passing the wire alongside the bone,

you may bend the wings to any angle you please. With regard to the case there are two methods: one a bell-glass, which, glass being now so reasonable, is certainly a very pretty and reasonable way of mounting, but inapplicable to birds which are to be placed on a wall, or to be represented flying; although this may be managed by attaching one wire from the point of the wing to a twig sufficiently firm, which it will scarcely appear to touch, if managed adroitly. It is likewise indispensable that a bird for a shade should be stuffed so well, as to look nicely in all positions. One thing must always be remembered, *do not have your case a shade too large*, just clear the object so as not to stint it for room; and in flat cases this applies chiefly to depth, for it should have sufficient light, or it will not look well. Wooden cases should be made as slight (in thickness) as is consistent with firmness; well-seasoned white deal is best; and the case should be formed of back, top, and bottom, open at the front and sides, and at each corner of the front two slight deal supports, rabbited on their inner edges, and presenting on the whole this appearance.

Having the case prepared, it should be papered with ordinary demy paper on the top and back within, and



when the paste is dry washed over carefully with size

and whitening, tinted with a little stone-blue; some add some touches of white subsequently to represent clouds, the ground representing the air; some also paste a landscape on the back, but this must be good, or you had better have plain colour. The bird to be placed in this case is either perching, standing, or flying; for the latter directions have been given. As to the two former, the perch must be firmly fixed in the small piece of flat wood upon which it previously stood, and put in upon it, the wood being fastened to the bottom of the case, either by screwing from below, from above, or gluing with stout glue, or by passing wire through two holes in the bottom of the case and the wood, and clinching above; in this case, or in screwing from below, let the wire or the screw into the wood, and putty over, and so if the bird is represented standing. The bird being fixed, the next thing is the decorating or "weeding," as it is technically called, and here we enter upon a subject so entirely of taste and fancy, that no fixed rules, as to the disposition, can in all cases be given. One rule applies equally to this as to landscape painting, viz. that there should always be a compensation of objects; that is, if you have a tuft of grass on one side which rises towards the top of the case, there should be something in the lower opposite corner to strike the eye, but not to rise above the midway up at furthest, and the ground, or floor, should not be over-furnished with moss, &c. After the bird is fixed, the whole bottom should be carefully glued over with thin glue, taking care, where the bird's feet are on the bottom, not to touch the toes



with the glue. Some fine-sifted sand or gravel should

then be sifted over it, and it will adhere wherever the glue has touched; for this purpose a small tin shovel is best, something in this form, and about two inches wide by four long, with a handle in proportion, which can be made to order at any tinman's for a trifle.

Everything used in "weeding" should be baked in a slow oven, otherwise spider's eggs and minute creatures, which are pretty sure to be contained in it, will make their appearance after the case is closed in the disagreeable form of destroying your specimen. Moss, &c., by being slowly dried, will also keep its colour better. Yellow moss, found on the roofs of old barns, and dark gray of the same species, are very generally useful; and where yellow moss cannot be had, the white or gray may be coloured with chrome, and looks as well. Water plants fade, being more or less succulent, and hence a little common water-colour with gum will be used with advantage and look less artificial than oil paint, which is often used. Fern looks very pretty as an adjunct for heath-birds, but it should be dried gradually and carefully, when *quite* full grown, and a small touch of light green, permanent white forming a portion of it, will give it a freshness and more natural appearance. Grass in seed (not in flower) of various kinds is also a very pretty addition; but bird-preservers have a habit of using dyed grass, and yellow and red *Xeranthymum*, or Everlasting, which is certainly to be avoided, and indeed anything which is unnatural. If it is wished to introduce a lump of earth, or an apparent bank, a piece of thick brown paper, bent to the requisite shape, and glued over and covered with sifted sand or gravel, has a very good effect; but insects and butterflies, or artificial flowers, unless they are extremely natural, should certainly be avoided. Regard should also be had to the season at which the bird

is usually seen. For instance, summer birds are, of course, surrounded by green and living objects, but autumn or winter visitants by decaying or dead herbage. It has often been made an experiment to represent snow, but it is difficult to obtain anything white enough, and at the same time of a crystalline character, which, of course, it should be. Potato farina nicely dried, mixed with Epsom salts pounded very fine, does not make a bad substitute; but the real difficulty lies behind, namely, the fixing it, and, more than all, the least damp takes very much from its appearance, if it does not destroy the effect, and hence we must have recourse to mineral aid, and any very white mineral powder mingled with pounded glass is perhaps best. It is unnecessary to say that the herbage upon which it is meant to rest should be touched all over with paste, not glue, and the white mixture shaken over it and left to dry. What will heighten the effect very much, if prettily executed, is a back landscape with a dark leaden sky and nearly black earth mingled with moss. To represent water, a small piece of looking-glass, surrounded with moss, &c., answers very well. The bills and legs of birds should be always varnished, and where the natural colour fades after death it should be restored by a thin coat of oil-colour of the required shade. The bird being fixed and the case garnished, nothing remains but to put in the glass; this is in three pieces, one for the front and a piece at each end. This can be pasted in with very strong paper round the edge, advancing sufficiently over the glass to hold it. In doing this it is not necessary to be very particular to avoid pasting the glass, as after it is dried it can be wiped clean with a damp cloth. The last operation is a very simple one, and done in a few minutes. You must procure some black spirit-varnish, which you can make yourself by

dissolving the best black sealing-wax in spirits of wine, and should be kept corked; when this is good it acts as paint and varnish at the same time, and dries as fast as it is put on. One or two brass rings screwed on at the top of the back of the case will finish the bird, and if the case be nicely and closely made, there is no limit of time to which the preservation of the specimen may not extend.



COLLECTING AND PRESERVING BIRDS' EGGS.

If I were asked, "In what object is the 'line of beauty' found which was first appreciated by and charmed a child's heart?" I should answer, "In the form of a bird's egg;" and the reason for this may be readily perceived in a child's own sentiment—"Because a little bird makes the egg, and God made the little bird."

There are articles in daily household use which have partly a similar form, but there seems to be an intuitive perception in infant minds, that they are the work of mortal hands.

It matters not whether the egg-shell be full or empty; it is the gracefully rounded outline, the curious markings, the delicate tint, or the pure white, combined with its utter fragility, which causes it to be longed for, and carefully treasured up when possessed; but when, by holding it too tightly for fear it should fall, it breaks to pieces between the tiny fingers, the grief that is occasioned thereby leads those who witness it to reflect that "a thing of beauty is *not always* a joy for ever," but often a source of sorrow.

Many grown persons collect eggs, some because they are pretty, and form an amusing occupation to them during the leisure hours; others, because they are a help to the more complete knowledge of the his-

tory and economy of birds ; and as one of these latter class I offer these remarks.

With regard to their "structure," being composed, as they are well known to be, of minute particles of carbonate of lime, united and strengthened by the addition of a small quantity of animal matter, it is no wonder that when blown they are so fragile, when we consider their thinness.

My first "collection" of sixty species (by the box containing it falling from the height of an ordinary table) became "smashed," with the solitary exception of one hedge-accentor's, over which I consoled myself as the "nucleus" of a future collection. Of this "special" egg more anon.

The "form" of eggs is somewhat varied ; round, roundish-oval, elongate, larger at one end, equal at both ends, more or less pointed (sometimes at both ends), and pear-shaped ; and all or any of these characters may apply to eggs of birds of the same species or class (with some exceptions), without including any "lusus naturæ" or unnatural form, such as bottle-shaped, spindle-shaped, narrowed in the middle, &c. &c.

Their "size" is variable also, but except in the case of unimpregnated eggs, not very much so ; however, in almost every nest one egg occurs smaller than the rest, and separate birds of the same species lay eggs of very different sizes ; as, for example, the chats, tits, and sparrows. This may depend greatly upon differences of food and locality, also upon the size of the birds themselves.

As to "colour," nothing is more variable ; bluish, yellowish, brown, red, pink, and purple of various shades, as in the tree-pipit ; blue, green, and brown, more or less deep, as in the gulls ; red, yellow, white, brown, and green, dull in tint, as in the common tern ; white, red, or spotted, as in the robin ; speckled, spotted,

blotched, clouded, striped, and zoned, in many species; in fact, it is a matter of great difficulty to match specimens out of two different nests, except they are principally white, and then their relative size or shape often destroys the appearance of uniformity.

If form, size, and colour are thus so little to be depended upon, there is now only the "texture" on which any reliance can be placed, and this, in the case of imperfectly shelled specimens, is rough, dull, and wanting in colour, when in a perfect egg it would be smooth, polished, and bright coloured. This may be easily seen on comparing several specimens. Eggs of birds of the hawk tribe are strong-shelled, generally rounded, whitish, or blotched with dirty red, having a more or less *calcareous* surface. Owls' eggs are rather strong, mostly rounded, white, having a *chalky* appearance, although the surface has not the outer layer as in those of hawks. Those of the crow tribe have the shell thinner, more elongate, colours green or blue clouded with brown and gray, surface somewhat polished, but irregularly and *faintly wrinkled* all over. Those of the roller, kingfisher, and woodpecker tribe, thin, round, or pointed, white, *finely polished*, smooth and transparent when recent. Eggs of the insect-eaters, as butcher-birds, thrush tribe, warblers, &c., are so thin that the yolk may generally be seen through the shell of any fresh specimen; they are mostly elegant in form, colours varied, of reddish, yellowish, grey, brown, and blue in the shrikes and flycatchers—reddish, green, white, brown, blue, and yellowish in the warblers, their surface slightly polished. In those of the seed-eaters, as the larks, buntings, finches, and sparrows, the shell is slightly stouter, more robust in form, colours brown, grey, bluish, or greenish-white, spotted with dull red, purple, or black; more opaque (excepting the linnet tribe), and rather more polished.

In the game birds the shells are tolerably stout, colour white, yellow, or brown, marbled and clouded with reddish or blackish; surface finely punctured, and much polished, those of pigeons glossy white, having similar characters of surface, but not so strongly defined. The eggs of the plover tribe are more or less pear-shaped, colours dull green, brown, or yellow, blotched with brown or black, surface dull, but rather smooth, and finely grained. The eggs of gulls and terns are stronger, more rounded, colours dull red, brown, blue, green, yellowish, or whitish, clouded and spotted, or blotched with dusky, surface rough and unpolished. Of the ducks and geese the shells are strong, more elongate, colours uniform, white, or pale tinted brown, greenish, or reddish-yellow, surface dull, but very finely grained, appearing to be quite smooth. In those of grebes and cormorants there is a greater degree of strength in proportion to size; more elongate, somewhat pointed at both ends, colour bluish-green, with a thick outer chalky covering, like those of hawks, but not coloured. The diver's eggs are stout, elongate, approaching the pear-shaped, dark rich brown, blotched with black, surface wrinkled like those of the crow tribe. Those of the guillemots are very strong, generally pear-shaped, and elongate, colour white, blue, or green, blotched and striped with black and ash colour, surface granular. Lastly, those of petrels are thin, roundish-oval, white, or faintly zoned with pale red, surface dull, but finely grained.

To preserve the shells of eggs, first take care to clear them of their contents; get a small, fine-pointed common syringe, such as is sold in toy-shops for a penny or twopence, and inject the specimen with water until it comes out quite clean. When an egg has been partly hatched or addled, the removal of the contents generally includes that of the internal membrane or

pellicle; this makes the shell weaker. When the specimens are quite clean internally, and have become dry (which will be in a day or two), take the syringe and inject them with a strong solution of isinglass (with a little sugar-candy added to prevent its cracking); blow this out again whilst warm. Let the shell get dry, and then wash the outside with a soft wet cloth to remove saline particles, dirt from the nest, &c. This method varnishes the inside, and the first specimen on which it has been tried was the before-mentioned hedge-accentor's egg, which is to this day as bright in colour as a fresh specimen.

Also in a pair of nightjar's eggs, of which species the delicate grey tint is particularly evanescent, one was injected in the manner described, and the other was not; in the first the grey is still perfectly defined, in the other it has entirely disappeared. Eggs which have lost their internal pellicle become strengthened by this process, and those which have not lost their colour greatly improved.



BIRD-CATCHING.

MANY of our readers, no doubt, are desirous of obtaining specimens upon which to try their proficiency in the art, in which it is to be hoped our previous chapters have rendered them skilful; and with this view we now append the various methods advised by the celebrated German naturalist, Dr. Bechstein, extracted from his very useful book,* 'The Natural History of Cage Birds.' In giving these instructions it must be understood that we are not advocates for the destruction of the feathered tribe, for we do not in any way sanction or countenance wanton destruction of any living creature, merely justifying the capture of a bird where its preservation is desired either for purposes of study or practical utility. Dr. Bechstein says:—

"A good bird-catcher ought to know not only the different modes of taking birds, but also all the calls for attracting the different species and sexes: the call-notes vary very much among house birds, according to their passions and wants; thus the common chaffinch, when calling its companions, often repeats *iack, iack*; when expressing joy, *fink, fink*, which it also does when angry, though louder and more quickly; whilst its cry of sorrow is *treef, treef*.

"The science of bird-catching consists in studying these different languages well, and it will ensure success.

"The first thing to know is the proper time to take

* Bechstein's 'History of Cage Birds,' with coloured plates. Price 3s. 6d. Groombridge and Sons, 5, Paternoster Row, London.

birds. For birds of passage, impelled by cold and want of food to change their climate, nets should be spread in spring and autumn; erratic birds, which change their place merely in search of food, may be taken, some in winter, some in spring, and others in autumn; those birds which never quit their native place may be taken at any season, but more easily in winter, when they assemble in small flocks.

“Autumn is the time for taking birds in nets; some, attracted by a call-bird, or by food, come of their own accord into the trap; others, as the different species of larks, must be driven to the net: but spring is the best season for employing the decoy, or call-birds, concealed in cages, and also for catching the northern birds on their return from the southern countries to their own. It is the best time for observing the different sexes of these birds, for the males always arrive some days, or even a whole week, sooner than the females; hence it happens that at first the bird-catchers take only the former, while the latter are caught afterwards. March and April are the best months for this sport, which should always be made in the morning from the break of day till nine o'clock, as afterwards the birds are too much engaged seeking their food to listen to the call of the decoy birds.

“As most of the house birds of the first class are caught in the net, I shall describe the simple manner in which it is done. Some rather strong branches of oak and beech are chosen with their leaves on; about the space of a foot is cleared of leaves, a foot and a half from the top of the branches, and in this space notches are made for fixing lime twigs: the bush, when thus prepared, must be placed on an eminence in the most frequented part of the birds' path, for birds of passage have fixed roads which they always follow, and in which numbers may be seen, whilst about four

hundred paces distant not one can be met with. These tracks generally follow the mountains which border on valleys. It is on these mountains then that the decoy bush must be placed; it must then be garnished with lime twigs, placed in an inclined position, and beneath on the ground must be put the decoy birds, covering their cages with branches of fir or any other tree, so that the birds cannot see one another, as that would prevent the birds of passage from stopping, and the others from calling.

"Decoy birds taken wild are preferred to those reared from the nest, for these never know the call-note well, or at least do not repeat it often enough.

"One of the best modes of catching is by what is called the *water-trap*; all kinds of birds may be caught by it, and there is always a choice. This sport is very agreeable in the hot summer days, for you have only to sit quietly under the thick shade of the foliage by the side of a running stream. A net of three, four, or six feet long, and three or four wide, according to the size of the place, must be spread over a trench made on purpose to receive the water. Some sticks of about an inch thick must be put into the trench level with the water, to which hoops are fixed to prevent the net from getting wet by falling into the water; the rest of this little canal must be covered with branches. If the place be well chosen it will be surrounded during the day with numbers of different birds. This sport may be carried on from the 24th of July till October, from the rising to the setting of the sun.

"When the *water-trap* can be set near a forest, in a grove of pines and firs, near quickset hedges and gardens, or in the middle of a meadow, wood or field birds may be caught at the same time. For the sake of convenience, small cages are made which can be folded up and put into the pocket. They only serve,

however, for the tamest kinds of birds, such as goldfinches, siskins, and linnets; those which are very wild and violent, as chaffinches and larks, should be put into a small bag made of linen, the bottom of which must be lined with felt. When brought to the house the violent species must be immediately put into a dark place, and their cages covered with branches or anything else, that they may not injure themselves, or spoil their plumage. A little attention to the birds' actions in such cases will point out what is best to be done, for amongst birds of the same species there is nothing regular in this respect."

Blackbird.—Timid and distrustful, the blackbird seldom enters the area or barn-floor trap, but it is easily caught in the winter with a noose or springe, by using service berries for a bait. It sometimes falls into the large traps set for tits, when the berries are spread over the bottom; limed twigs put with the berries in a place cleared from the snow, will catch many also; it also goes to the water trap, but generally at nightfall.

Blackcap.—Every taste but that of the palate must be destroyed if this charming bird is caught for the table. Besides, it is by no means numerous; but if it is desired as an ornament to the house, snares baited with currants must be laid for it in July and August, the greatest care being taken to save the feet, which are very likely to be broken. Patience is very necessary in order to succeed, for it is a very suspicious bird, approaching slowly, and falling into the snare only when pressed by hunger. The same suspicious disposition causes it to repair with repugnance to the water-trap, though in other situations it delights in water, and often bathes. If it perceives anything unusual it will remain for hours without

approaching, and will pass twenty times by currants which are hung up as a bait without touching them, though very greedy of this food; but if it sees another bird bathe, or drink, it takes courage, and soon falls into the trap. The young, before moulting, still foolish and inexperienced, are more careless, and may be taken in great numbers in autumn; and in the spring they are as easy to catch as the nightingale, by means of a net or limed twigs, in a place cleared from moss and turf, and baited with meal worms and ants' eggs.

Bullfinch.—There are few birds so easily attracted by the decoy bird as bullfinches. They may also be taken by any of the usual means. In winter numbers may be caught by a noose, by hanging to it such berries as the bird likes; in spring and autumn they may be caught in the area or barn-floor trap; and provided they see berries there, the decoy bird is not wanted; it is sufficient if one imitates their soft cry of "*tui, tui*," in the hut.

Bunting, Corn.—In autumn these birds may be taken in an area with a decoy bird; in winter, before the barn door, with birdlime or a clapper; in the spring with a bird-call.

Bunting, Foolish.—These birds come without difficulty at the call of the yellowhammer, and enter into every kind of snare so heedlessly, that they have thence been given the name of *foolish bunting*.

Bunting, Red.—In autumn they enter the area or decoy with the chaffinch; in spring, when there is snow, they approach the barns and dunghills, and there, as well as in open places in the fields and on the hedges, they are very easily taken with a net or birdlime.

Butcher Bird.—Although it flies very swiftly when pursuing its prey, it may easily be taken if a nest of young birds, crying from hunger, be suspended to some lime twigs. In autumn and winter, it will sometimes dart on birds in cages which are outside the window. It may then be easily caught, if the cage be put into a sort of box, having the lid so placed that the bird by the least touch would cause it to fall upon itself. These means must be employed by those who wish to possess birds which they can let go and come at will.

Carrion Crow.—The easiest and most usual method is with paper cones, at the bottom of which is put a bit of meat, and birdlime on the inner edges. It may also be caught with lime twigs placed in the yard, or before the house, on horse-dung and among scattered grain.

Chaffinch.—With good baits the chaffinch may easily be drawn within the area or decoy from Michaelmas to Martinmas, and in spring throughout March. Those that remain the winter, or return early in the year, may be taken in a net baited with oats.

Bird-catchers use in spring lures and lime twigs and the sport lasts as long as the time of flight, which begins at daybreak and ends at nine o'clock. These birds employ the rest of the day in seeking food in the fields, in resting, and singing. In the same manner are taken linnets, goldfinches, siskins, yellowhammers, and bullfinches.

Some make use of the excessive jealousy of the males to procure those whose song is very superior. As soon as a bird-catcher who likes this way discovers a fine songster wild, he immediately seeks another male that is in the habit of often repeating its natural cry, *fink, fink*, ties his wings, and fastens to his tail a

little forked stick, half a finger long, well covered with birdlime; thus prepared, he fastens him under the tree on which the one he is watching is perched; this no sooner sees and hears the false rival than he becomes enraged, pounces on him like a bird of prey, and is caught with the birdlime; his attack is often so violent that sometimes the bird of call is killed by the stroke of its adversary. The following is a surer method:—A soft, narrow leather band is fastened round a male, to which is attached a string a foot long, fastened by a peg, which allows it but a short space to range. This bird, as we have already said, is called, in bird-catchers' language, a percher. A circle of birdlime is made just beyond its reach, and a cage with a chaffinch, accustomed to sing either in the shade or exposed, is placed under a neighbouring bush; as soon as this last begins his song, which should be a natural one, not any learned in confinement, the chaffinch that is to be procured darts from the tree like an arrow on the percher, which it mistakes for the songster, and remains fixed by the birdlime. This new prisoner will sing the same year if it is caught before Whitsuntide; if after, it will never sing, but will die, evidently from grief at being separated from its female and young ones. A bird-catcher, cruel as he is stupid, who, without the least reflection, only thinks of gratifying his ridiculous passion for bird-catching, may in an hour deprive ten or twelve females of their beloved companions, their protectors, and numerous young ones of their father, purveyor, and support; such thoughtless cruelty is, alas! only too common. As soon as the young chaffinches have left the nest, the bird-catchers are very active in discovering the places where at noon they are accustomed to drink; there they set perches covered with birdlime, and by this means many of these little unwary creatures are taken.

Crossbill.—With the decoy birds nothing is easier than to take the crossbills in the autumn and spring; one large rod, covered with strong birdlime, is all that is necessary. It must be put in a glade in the wood which these birds frequent, with the decoy bird by the side; this, by its continual cry, will soon attract them. In Thuringia the people put nooses and spring traps on the top of some of the highest pines, and there hang the cage of the decoy bird; as soon as one crossbill has settled, the others follow; so that as many birds are taken as there are traps set, particularly if the stick of the spring traps be placed so that the bird must perch on it.

Dipper.—Each pair has a chosen spot, which it seldom leaves; and they are generally seen there either on a trough, a stone, dike, or a bush growing near; by fixing close to these places limed twigs, to which are fastened worms, which writhe about and attract attention, it is very easy to catch them.

Dunnock, or Hedge Sparrow.—This is very easy at their return in the spring. As soon as they appear in the hedges, where they soon discover themselves by the cry "*issri*," a little place near, where the earth is bare, must be found; after having placed limed twigs, and thrown among them earth or meal worms for a bait, the dunnock is gently driven towards them without alarming him; as soon as he perceives the worms he darts upon them and falls into the snare. In the autumn they may be caught in the area and with a noose; in winter in the white-throat's trap; but they resort in the greatest numbers to the water trap, not so much for the sake of bathing, as to seek for dead insects or decayed roots.

Flusher.—As soon as this bird arrives in May, the

bushes on which it most frequently perches must be observed; these are very few, and on them the lime twigs must be placed; it is often entrapped within a quarter of an hour. Success is more certain if a beetle, maybug, or breeze-fly be fastened near the lime twigs with horsehair, by two feet, so that it can move its wings. As soon as the bird is stuck in the birdlime it is necessary when taking it to avoid its beak, as it pecks very hard.

Goldfinch.—In spring these birds are taken on a lure bush, with a decoy bird of their own species. They will also enter the area or barn-floor trap, with chaffinches, if bundles of thistles are placed there; but it is not without difficulty, for they are very watchful to avoid nets and lime twigs. In the winter, by building up bundles of thistles, and placing snares and traps on them, several may be caught; but in autumn and spring lime twigs should be placed on them in preference. It is a still better plan to place bundles of thistles in a tree stuck about with lime twigs.

Green Bird.—If the decoy bird be a good one, the green bird may be easily caught in the area or barn-floor trap, even in December. In the spring it may be taken with birdlime on the lure bush, when a linnet will do for the songstress.

Hawfinch.—The haste with which these birds come on hearing the call makes it very easy to catch them in the net, by throwing berries or hemp seed on the trap. In autumn and winter they may be taken by the noose, with service berries; in spring they may be caught by placing lime twigs on the nest.

Jay.—Should any one wish to catch these birds, he must seek in autumn for a lonely tree, about five or six paces from the other trees of the wood, which the

birds frequent most; on it lime twigs must be placed. In order to effect this, most of the branches are cut off in such a manner as to form a kind of spiral staircase, commencing about ten or twelve feet from the ground, and extending to within six of the top. After having shortened and reduced the branches to five or six spans in length, the lime twigs are fixed to them; under the tree must be placed a hut, made of green branches, large enough to contain as many persons as wish to conceal themselves. On the top of this hut is placed a live owl, or one made of clay; even the skin of a hare, arranged so that it may be moved, will suffice. Nothing is now wanted to attract the jays but a bird-call, which is made of a little stick with a notch cut in it and a little piece of the bark of the cherry-tree inserted, another bit serving for a cover. On this instrument the voice of the owl, the great enemy of the jays, may easily be imitated; and as soon as they hear it they come from all sides, while their cries must be repeated by the people in the hut, which makes them assemble in still greater numbers. They are soon entangled in the birdlime, and fall pell mell into the hut, their weight easily dragging them through the slight covering. Many other birds also collect on hearing the deceitful call, and, wishing to assist their brethren, are themselves entrapped. Thus, in a few hours, many jays and a great number of other birds may be caught, such as magpies, thrushes, woodpeckers, redbreasts, and tits. Twilight is the best time for this sport.

In the month of July jays may also be taken in the *water-trap*, where young ones, with their tails only half grown, are most frequently caught; these may be taught and tamed.

Kestrel.—Lime twigs placed over the nest will

easily secure the old ones when they come to feed their young ; or a bird of prey's basket, with a lark or mouse put in it as a lure, may be placed where these birds are most frequently seen. This machine is raised on four stakes, and somewhat resembles a common safe, having a lower shelf as large as a moderate-sized table, with four upright posts, to which are fastened the partitions of net or wire ; on the top and sides are fixed two iron rods ; on these, by means of rings, there runs a net which covers the whole.

Kingfisher.—When the place which one of these birds frequent most, and which is generally near an eddy in the water, is well known, a stake must be fixed to which the snare, called a springe, can be fastened ; by this means the bird may be easily taken. Lime twigs may also be put on a bush or stake near the water's edge, provided it does not hang so much over the water as to risk the bird's falling into it when fixed by the lime.

Linnet.—These birds are distrustful and suspicious, and, notwithstanding decoys and perching birds, it is very difficult to entice them within the decoy or area, and never many together. In the spring, by means of a good decoy bird, a few may be taken on a decoy bush. In the autumn, by fastening snares or lime twigs on the stalks of lettuces, of the seeds of which the linnets are very fond, several may be taken. Our shepherds turn and support the cribs, used to feed the sheep from, in such a manner that the linnets, coming to gather the grains of salt, easily overturn them on themselves.

Missel Thrush.—These birds are taken in autumn with nets and snares, with berries for the bait, and they are caught in great numbers. They may also be

taken in February, by placing under the trees on which the mistletoe grows, perches with limed twigs. They may also be caught in the water-traps at sunset. Those which are yellowish under the body, being males, are chosen for confinement. During the first days of captivity they are savage, sulky, and often refuse to eat, so that many perish in this way; those which are saved soon repay the trouble by their songs and familiarity.

Nightingale.—Nothing is easier than to catch a nightingale in the season of pairing. If a little furrow, smooth at the bottom, is dug in a dark soil, and some meal-worms or ants' eggs are thrown into it, he will immediately fly to these delicacies. By putting also in the same place limed twigs, or a small net which may be easily dropped, he will soon be caught; it is even sufficient to fix over the furrow a bit of wood supported by a stick, which will fall as soon as the bird perches upon it. He is so unsuspicious that he observes the snare being laid, and then foolishly falls into it, when the bird-catcher has moved only a few steps from it; he will even allow himself to be led to it when at a little distance, if in a gentle manner. A bird-catcher may thus, in a few hours, depopulate a whole district of these delightful songsters. If, however, this is feared, there is a means of baffling his intentions, by anticipating him, and catching the nightingale we wish to preserve in our neighbourhood, either by a limed twig or in a net, and letting him go again. This experiment will prevent his falling so readily into the snare in future. In the greater part of Germany, indeed, it is forbidden, under a very heavy penalty, to catch nightingales. Another mode of taking them is by nooses and springes, and suspending for a bait, instead of berries, live meal-worms; but

there is one disadvantage attending it, while struggling the bird almost always injures his feet, especially in springes.

Nuthatch.—As it has the same taste for hemp-seed and oats as the tits, it may often be caught in the same snare; it may also be taken in the area or barn-floor trap.

Ortolan.—In spring these birds are easily attracted to a decoy bush, by a female of their own species, or a yellowhammer. In August a turfy place should be chosen near brambles, to form a small area, as a decoy, like that made for chaffinches. It must be surrounded with a low hedge, with some oat-ears fastened to it. About the area should be placed one or several birds of call, especially a perching bird (that is to say, a bird of the same species, with a band of soft leather round it, and confined by a small string, fastened to a peg-stick in the ground, which prevents its going beyond the prescribed limits. Here it should be given plenty of food and water, in order that the birds to be caught may be the more easily attracted within the area, from seeing one of their own species in a place of abundance. This kind of decoy bird is often more necessary than any other.

Owl.—When the place of its retreat during the day is discovered, it cannot fail to be taken if a net in the form of a bag or sack be placed over the mouth of the hole, for the bird will by this means entrap itself when endeavouring to come out for the evening.

Oxeye or Greater Tit.—The chase after tits is, according to bird-catchers, one of the most agreeable, and is pursued in many ways; but I shall confine myself to two or three of the surest methods, specify-

ing the best for taking those birds that are for the house.

In autumn and spring, the bird-catcher should go into an orchard, or any other place much frequented by oxeyes, carrying one with him as a decoy ; this must be placed on the ground in a small square cage, and some sticks, with lime twigs fastened to them, fixed obliquely around it. The tits, attracted by curiosity, or the desire of approaching one of their own species that calls them, quickly descend, and are caught in the lime twigs. A whistle made of the bone of a goose's leg succeeds still better ; with this instrument all the tits in the neighbourhood are quickly assembled ; for the tone being stronger than the natural call, it is heard farther ; if there are but few of these birds near, they are sure to be all caught.

They are easily attracted, in winter, to a trap, by the kernels of nuts, lard, and oats. This trap should be placed in a garden, with a little oat straw fastened under in such a way that it may be seen at a distance, as the tits are instantly attracted thereby. It is a small box a foot in length, and eighteen inches in height and width, the sides of which, when not made of small boards painted green, are formed of small elder sticks, tied or screwed to the four corner sticks ; in this case only two small boards are required, one for the bottom, the other for the cover, which must be fastened on with packthread, and turn as with hinges ; from the middle of the bottom rises a peg supporting a cross stick, with a nut kernel at one end, and a little lard at the other ; this cross stick supports a small perpendicular one, which keeps the cover open three or four inches. When a tit hops on the cross stick and begins pecking the nut or lard, the cover falls, and the bird is caught.

The oxeys, like the other tits, assembles in numbers

at the water trap, commonly from seven to nine in the morning, and from four to five in the evening.

In autumn these birds are taken in nooses and common bird-traps, baited with berries, but the snare must be of horsehair, for if of thread, the bird, as soon as it feels itself caught, will try to bite through it; as mice do.

Quail.—There are several different methods of taking quails, but I shall only mention the commonest and easiest. The male birds are generally caught in a net called a quail-net, by means of a call which imitates the cry of the female in the breeding season; it is the way adopted by bird-catchers in the spring, when they wish to take a male that sings in a superior manner, that is, which repeats a dozen times following the syllables "*pieveroie*." If the male has not yet met with a mate, and if he has not been rendered suspicious by some unskilful bird-catcher, he will run eagerly into the snare. The most important thing is to have a good call; they may be had cheap of turners at Nuremberg, who make them of leather, with a pipe turned from the bone of a cat or hare, or the leg of a stork; but they may easily be made by anybody. The first thing necessary is a piece of calf-skin, one foot in length, and four inches in breadth, the sides must be sewed together within two inches of the end, and the bottom filled with a piece of wood an inch and a half in length, and rings composed of thick leather, the diameter of the interior opening not exceeding an inch and a half, are pushed into the sewed cylinder, and kept about a quarter of an inch apart; the whole may afterwards be pressed close together, making the rings touch each other; then a tube made of the bone of a goose or hare, and filled at the end like a common whistle, is fastened to the part of the cylinder left

unsewed ; the interior is then stopped with wax near the notch on the side of the leather, and a hole pierced through it with a knitting-needle ; the upper part of the tube must also be stopped with wax, and lastly, the lower part, which is thus become a kind of whistle, is very firmly tied to the unsewn part of the cylinder. When the call is to be used, the lower end must be held firmly in one hand, and the leather cylinder worked up and down with the other, making the rings approach and separate, which produces the notes of the female, "*peuk, peuk, pupu.*"

As soon as the male quail is heard that you wish to procure, you must advance softly to within fifty paces of his station, and place the trap amongst the wheat in such a position as will suffer it to fall level with the ground, to prevent the bird's passing under and escaping. Then retire a few steps back, when the quail will soon utter its song, to which reply with two or three notes, that when the quail is silent he may only hear one or two, from the call exactly resembling the cry of the female. If this is not done with care, the bird will suspect treachery, and will either retire or remain silent, and never after fall into such a snare ; but if skilfully done, it is surprising to see how the bird proceeds directly to the call : if by chance he miss the trap, he will go so near as to be within reach of the hand ; in this case it is best to retire softly to the other side of the trap and repeat the call, which will again attract it. There are some quails that know how to avoid the net, particularly if placed in too open and exposed a place. In this case it is safest to turn it in a corner at both ends, and thus when it tries to turn it becomes entangled.

It is proper to notice, that in damp weather, or when it rains, the quail does not run, but flies immediately towards the call. It does this also in dewy

mornings and evenings ; dry days should therefore be chosen for this chase. In the pairing season, two, three, or even four quails may be taken at the same place.

If no male is heard in the field, the call of the female must be well imitated on a larger and more powerful bird-call, and, if any males are within hearing, they will not fail to answer ; the person must then advance quickly, placing the net so as to stop their road, and repeat the call.

When a female is to be caught, it is best to employ a common net, such as is used to take quails in autumn ; but this chase should be deferred till towards the end of harvest, when most of the corn is cut, and only a few pieces left standing, which serve to harbour numbers of these birds. Several nets are used at once, as many as six or eight ; some of them are placed across the field of corn, and the others parallel to them at the extremity of the same field : this being done, the party go to the opposite side and begin to drive the quails into the nets in the middle of the field by means of a packthread stretched across the corn, having little bells suspended to it by threads, so as almost to touch the ground, two persons holding it, and as they advance shaking it from time to time. As soon as the prisoners are secured, the march is continued towards the nets at the end of the field ; and in this manner great numbers of quails, both male and female, are procured either for the house or for the table.

Redbreast.—In spring, when the redbreasts frequent the hedges and bushes, sticks are passed transversely through them, on which limed twigs are fastened, then two persons gently beat the hedge or bush to drive the birds towards the twigs, where they are soon caught, for redbreasts have the habit of perching on

all the little low projecting branches, in order that they may discover earth-worms. This sort of red-breast chase is very common in Thuringia, where many persons keep them. Limed twigs may also be put in a bare place with earth- or meal-worms, just as for the dunnoek. The small nightingale net and the whitethroat trap catch many. They are also caught at the water-trap; but the greatest number are caught in autumn with the noose, baited with elderberries, which are at that season their favorite food. If they are caught for the room (and it is a pity to hunt so pretty a bird for the table), it is necessary, in order to preserve their feet, to cover the springes with felt or cork.

Redpole.—In the spring and autumn the lesser red-poles may be taken in flocks in the area or barn-floor trap, with a decoy of their own species, or even with a siskin. Many may also be caught with such a decoy on a decoy bush. They are so silly, or so confiding, that they will even allow themselves to be taken close by the bird-catcher, who is collecting their entrapped companions. This stupidity, or simplicity, is common in all birds that come from the more remote northern parts. Brought up far from man, and out of reach of his pursuit, they know not that fear and distrust which is felt by those that inhabit populous countries.

Redstart.—Sticks covered with birdlime should be placed across the hedges frequented by these birds; they must then be driven gently towards them. They are also attracted under nets, and amongst limed twigs baited with meal-worms. In autumn they may be taken in nooses, by suspending elderberries near them, either in orchards or thickets. Those intended for the house should be taken in bird-traps or springes, taking care that the wooden part be covered with felt or

cork, to prevent the legs being broken. The young ones of the first year are the easiest to preserve. They also go to the water-trap without difficulty.

Reed Warbler.—These birds are sometimes caught by placing lime twigs on a place cleared of the turf, and throwing meal-worms there.

Shrike, Little.—When the particular brambles and branches have been observed, on which this bird watches for its prey, it is not difficult to catch it; for notwithstanding its great quickness, it is not the less imprudent, for it allows itself to be caught in the birdlime in the most stupid manner.

Siskin.—With good traps and nets made for this purpose, several dozen of these birds may be taken at once in the winter. They also collect in numbers, in the spring, on the decoy bush, and they are so fearless, that in the villages a person, who has his house situated near a stream bordered with alders, need only place a siskin in the window, near a stick covered with birdlime, and he may catch as many as he wishes. I have caught some at my window in a cage strewn with hemp- and poppy-seed, by letting the door fall by means of a string, when the birds had entered, one of the decoy birds in my room serving to attract them. When the place where they drink at noon is discovered amongst the alders, numbers may be caught by merely laying across the stream some branches covered with birdlime.

Skylark.—It would take too long a time to describe all the modes of catching larks which are in use. It is enough to say that with day and night nets, known by the name of lark nets, so large a number of these birds are taken alive in the open country, that it is easy to have a choice of both males and females.

This lark snaring is accomplished by placing a considerable number of nets perpendicularly like walls, which are called day nets, towards which, in the dusk, the birds are forced by means of a long rope, which is drawn along the ground, and drives them forward; in the night a square net, called a night net, is carried to a spot where it is known that many larks are collected in the stubble, and there they are covered just when they begin to flutter.

If, in the spring, it is wished to procure a good singing male—for some are better than others—a lark whose wings are tied, and with a little forked lime twig fixed to its back, must be carried to the place where such a bird is to be found. As soon as it is let loose, and the desired male has perceived it from high in the air, he will fall upon it like an arrow and attack it; but soon, the dupe of his jealousy, he will find himself caught by the lime.

Sparrow.—Sparrows are so cunning that it is difficult to attract them within the net or on lime twigs. They may be caught in numbers, however, on the brambles in a field where sheep are kept by sticking plenty of birdlime about them. They may be taken also by placing a net before those that have retired to trees and under the tiles to sleep for the night.

Starling.—It is principally in autumn, and in places filled with reeds, that the bird-catchers take great numbers of starlings in nets prepared for the purpose. They may also be procured by means of an osier fish-net, placed among the reeds, which they frequent in the evening, and baited with cherries. Though this means is limited, as many as a hundred have been procured by it in one night.

Tit, Bearded or Reed.—There is much difficulty in

this. Fishermen who know the places frequented by this species place limed twigs on the reeds, and try gently to drive them towards one side, and sometimes catch a few.

Tit, Blue Tit, or Tom Tit.—They may be caught in the same way as the oxeye.

Tit, Cole.—Less timid and distrustful than the oxeye, this species may be caught with greater ease. A limed twig fastened to a pole is often sufficient, with which you approach the tree on which the bird is, and, touching it with the twig, it becomes your prisoner.

Titlark.—To take the bird from its nest by a limed twig, and thus destroy the young family by hunger and misery, is a cruelty which none but a harsh insensible amateur could resolve upon. I prefer using the night net in autumn. This bird is also caught in the water-trap in August and September.

Thrush.—Of all the birds for which snares are laid those for the thrush are most successful. A perch with a limed twig is the best method for catching a fine-toned male. In September and October these birds may also be caught in the water-traps, where they repair at sunrise and sunset, and sometimes so late that they cannot be seen, and the ear is the only guide. When they enter the water haste must be avoided, because they like to bathe in company, and assemble sometimes to the number of ten or twelve at once, by means of a particular call. The first which finds a convenient stream, and wishes to go to it, cries in a tone of surprise or joy, "*sik, sik, sik, siki, tsac, tsac, tsac*;" immediately all in the neighbourhood reply together, and repair to the place: they enter the bath, however, with much circumspection, and seldom venture till they have seen a redbreast bathe without

danger ; but the first which ventures is soon followed by the others, which begin to quarrel if the place is not large enough for all the bathers. In order to attract them it is a good plan to have a tame bird running and fluttering on the banks of the stream.

Wagtail.—If there is snow on the ground on their return in March, it is only necessary to clear a place (below the window will do), and scatter meal-worms amongst limed twigs, or place these on stones or wood where the birds assemble, or even fasten a meal-worm to a limed twig, loosely stuck in the earth, and you may soon catch a wagtail.

Wheatear.—Limed twigs must be placed on the stones or stakes where these birds rest, or even on sticks fixed in the ground for the purpose, and they must be driven gently towards the snares.

Whinchat.—In spring, when some of these birds are seen in a field or meadow, sticks, furnished with limed twigs, should be stuck there, and the birds gently driven to that side, to induce them to settle, which they will soon do. In summer, the noose, spring-trap, and limed twigs, must be employed in the following manner :—If the noose is used, a stake must be set up, about three feet high, slit at the top to put in crossways a stick three inches long, and the noose is placed an inch and a half above, to be of the height of the bird's breast when it is perched on the stick.

If limed twigs are used, forked switches three feet long should be employed ; the fork, four inches in length, must be covered with birdlime. Spring-traps or gins must be suspended to small stakes or cabbage-stalks. As soon as a sufficient number of these spring-traps, snares, and limed twigs are prepared, they must be carried to a cabbage-garden, when a number of these whinchats has been seen : there fix the stakes in

cross lines, two or three paces apart; then go to the end of the garden and drive the birds gently towards the snares; they jump from one cabbage-stalk to another till they approach the stakes; then you stop, and in a short time the birds are caught one after another. When they are caught, the prisoners must be taken out and the snares arranged again; then go to the other end and again drive the birds forward as before, and thus continue till the sport is over.

White-throat.—The easiest way is to place limed twigs on the nest, but this is repugnant to persons not cruel. Towards the end of summer spring-traps may be set, with elderberries and gooseberries hung near them. It is difficult to take these birds at the water-trap.

Woodchat.—A cruel method, but the surest, is to place birdlime on its nest, this being the most wary species of shrike; but, as it bathes freely, it may be taken about the middle of the day at its washing-place, if near hedges. It is often found drowned in large ponds.

Woodlark.—The woodlark may be caught on the nest by means of limed twigs; but as it is very cruel to separate a pair, and thus to destroy a whole family, it is better to wait till autumn, and to use the night net. They may be caught early in the spring, when there is snow on the ground, by placing limed twigs or nets in cleared places. This is the best method of catching them. It is true that this plan will not succeed in all years; but another may be substituted, if we have a decoy woodlark, by placing it under a folding net, in a field frequented by a flight of this species, which will not fail to join it. The same means also may be used as with the chaffinch, namely, by

tying the wings of a woodlark with a limed twig on his back, and letting him run to the place where there is a male of the same species. By this means the bird-fancier may obtain whatever kind of singer he prefers.

Wren.—If in winter, a white-throat trap is set in a place much frequented by these birds, and meal-worms scattered within and around it. In this the wrens will surely be caught. They may be entrapped in autumn with spring-traps and springes, by hanging elderberries before; but after every precaution they generally break their legs.

Wren, Gold-crested.—As they are not fearful, they may easily be caught by gently approaching the tree where one is perched, and merely striking it with a limed twig fastened to a pole long enough to reach it. It may be brought down also with water, in the manner adopted by M. Le Vaillant; that is, by first putting into a gun the common charge of powder, then a wadding of silk, then, as soon as the bird is within reach, two spoonfuls of water are poured in and covered with a second wadding of silk, which must not be rammed down hard, lest the water should reach the powder below. This load, discharged at the distance of twenty paces, is capable of wetting the bird so completely that it may be taken by the hand; but if there are hedges in the neighbourhood, or if a stronger bird be fired at (a chaffinch, for instance), it may easily escape.

Many gold-crested wrens may be caught by means of a hut set for any small birds, when the way to attract them is known. They come in great numbers to the water-trap, and by their often repeated call of *tzitt, tzitt*, give notice of sunset and the arrival of larger birds.

Wryneck.—In general it is caught by putting lime twigs round the nest; but if the weather be stormy, as in spring, when it is busy searching the bushes for insects, it may even be taken by the hand. The one I now have was brought to me by a little boy who had taken it in this manner.

Yellowhammer.—The yellowhammer is easily taken in winter, near our dwellings, either in a net, with a stalk of oats as a bait, or under a basket or sieve, which may be thrown down, by drawing away the small stick that supports it by means of a string. They will also enter the area or barn-floor trap, if a perching bird is fastened there, by a string attached to the leather band round its body; in spring they may be caught like other birds, by means of a bird-call.



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